

REMARKS

Claims 1-29, 69-71 and 91-92 remain in the application. Claims 1, 4, 9 and 109 have been amended. The Examiner is authorized to charge any fees arising from this response to Deposit Account No. 10-0096.

The Examiner has rejected Independent Claims 1 and 9, and dependent Claims 2, 4-8, 10-11, 14-15, 19, 21, 26-27 and 29, under 35 U.S.C. §102(b) as being anticipated by USP 6208247 (“Agre”). Applicant traverses this rejection on the grounds that Agre does not teach a continuous, long-term memory which is capable of storing seismic reflections from a seismic survey from a series of seismic shots over an extended period of time.

The Examiner has equated the buffer 16 of Agre with the “seismic data recorder” recited in Applicant’s claims. It is Applicant’s position that the buffer 16 of Agre does not have the same function as the seismic data recorder of Applicant’s claims, and for this reason, the buffer has different physical characteristics than Applicant’s seismic data recorder. Applicant has amended the claims to clarify the nature of these physical differences.

Agre teaches that the buffer 16 is part of a digital signal processor (DSP) 18 and that the buffer stores data for processing by the DSP. Agre teaches that the DSP 16 filters and analyzes the buffer data and to extract information regarding the amplitude and spectral characteristics of the buffer data, thereby allowing the microprocessor 20 to make decisions based on the determined amplitude and spectral characteristics. For example, if certain low frequency signals are detected, indicating a vehicle, it may cause a wireless transceiver 22 to transmit a warning. Col. 5, lines 24-35.

It is well known that buffers are temporary storage areas for data stored for a short amount of time. See <http://www.webopedia.com/TERM/b/buffer.html> (“A temporary storage area, usually in

RAM. The purpose of most buffers is to act as a holding area, enabling the CPU to manipulate data before transferring it to a device.”); <http://www.techterms.com/definition/buffer> (“A buffer contains data that is stored for a short amount of time, typically in the computer’s memory (RAM). The purpose of a buffer is to hold data right before it is used.”); [http://encarta.msn.com/encyclopedia_761557384/Buffer_\(computer_science\).html](http://encarta.msn.com/encyclopedia_761557384/Buffer_(computer_science).html) (“Buffer (computer science), in computer science, an intermediate repository of data—a reserved portion of memory in which data is temporarily held pending an opportunity to complete its transfer to or from a storage device or another location in memory.”); http://en.wikipedia.org/wiki/Data_buffer (“In computing, a **buffer** is a region of memory used to temporarily hold data while it is being moved from one place to another. Typically, the data is stored in a buffer as it is retrieved from an input device (such as a keyboard) or just before it is sent to an output device (such as a printer). However, a buffer may be used when moving data between processes within a computer.”); and <http://www.merriam-webster.com/dictionary> (“a temporary storage unit (as in a computer); *especially* : one that accepts information at one rate and delivers it at another”.) The purpose of a buffer is to hold data right before it is used. Another purposes for buffers is to make negotiations easier between devices of two different speeds. Typically a buffer is comprised of RAM. RAM is a type of memory whose contents are erased when the system’s power is turned off or interrupted. See http://encarta.msn.com/encyclopedia_761553199/RAM.html (“RAM, in computer science, acronym for random access memory. Semiconductor-based memory that can be read and written by the microprocessor or other hardware devices. The storage locations can be accessed in any order. Note that the various types of ROM memory are capable of random access. The term RAM, however, is generally understood to refer to volatile memory, which can be written as well as read.”) For this reason, RAM is considered volatile.

It is clear from Agre's selection of the term "buffer" and Agre's description of how the seismic data is processed by the DSP and how the processed data is used by the microprocessor, and by the description of how the system of Agre looks at one-off seismic events, that the system of Agre is not recording seismic data in the manner of Applicant, namely for seismic shoots and for geological mapping over an extended period of time. Simply put, the buffer of Agre is not disposed for long-term storage of large amounts of data collected over a period of time as is now claimed by Applicant. The buffer of Agre could not function as a seismic data recorder as now more clearly recited by Applicant in the claims. It is a buffer and this term has a specific meaning in the industry. The Examiner must accord the standard industry meaning to the term "buffer" as used in Agre. Specifically, consistent with the standard usage of the term "buffer" as referring to a short-term, transitory storage, Agre only "stores" data related to a single event at a time and only long enough for the DSP to pull out the wave characteristics of the data for action by the microprocessor.

For this reason, the seismic data recorder as now claimed by Applicant cannot be equated to the buffer 16 of Agre. Thus, Agre does not teach each and every element of either Claim 1 or 9. Thus, the rejection of Independent Claims 1 and 9 under 35 U.S.C. §102 as being anticipated by Agre should be withdrawn and these claims should be passed to allowance.

The Examiner has rejected independent Claim 109 under 35 U.S.C. §103(a) as being unpatentable over Agre in view of various references. The Examiner relied on Agre as teaching each of the elements of Claims 109 other than a three component geophone. Applicant traverses the rejection under 35 U.S.C. §103(a) because Agre does not, as explained above, recite each of the elements of Claim 109, particularly the seismic data recorder as now claimed.

Notwithstanding the foregoing, Claim 4 has been amended to recited that the clock is coupled to said seismic data recorder to record the time that seismic signals are detected by said geophones.

To the extent the Examiner equates the buffer 16 to the seismic data recorder of Applicant's claims, no clock is taught as being attached to the buffer 16 and capable of providing a time stamp for storage on the buffer in association with the stored seismic data. In contrast, because the seismic data of Applicant's invention is used to map geologic formations, precise travel times to and from the geologic reflectors must be known. Hence, providing a time stamp for recorded seismic data for subsequent synchronization with the source is an important aspect of the function of Applicant's device. Thus, a clock must be disposed to provide a time stamp that is recorded on the seismic data recorder along with the seismic data. For this reason, Claim 4 is not anticipated or rendered obvious by Agree and should be passed to allowance.

For the foregoing reasons, allowance of the pending claims is earnestly solicited.

All of Applicant's arguments and amendments are without prejudice or disclaimer. Additionally, Applicant has merely discussed example distinctions from the prior art references. Other distinctions may exist, and Applicant reserves the right to discuss these additional distinctions in a later Response or on Appeal, if appropriate. By not responding to additional statements made by Examiner, Applicant does not acquiesce to Examiner's additional statements, including statements referring to any motivation to combine references or any naked statements of obviousness. The example distinctions discussed by Applicant are sufficient to overcome the anticipation and obviousness rejections.

The Examiner is authorized to charge any fees arising from this response to Deposit Account No. 10-0096.

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Date: July 22, 2008

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